U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2010-0050-EA

PROJECT NAME: Cottonwood Draw (06301) Grazing Allotment Grazing Permit Renewal

LEGAL DESCRIPTION: 6th Principal Meridian, Colorado
T 6 N, R 103 W, Sections 30, 31, and 32

APPLICANT: Jon and Marynell Snow

ISSUES AND CONCERNS: None

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The Cottonwood Draw Allotment (06301) is 1,206 acres (144 BLM acres) located on Blue Mountain in western Moffat County (Figure 1). Access to the allotment is off of the National Park Service (NPS) Harpers Corner Road which traverses Blue Mountain from Highway 40 at the Dinosaur National Monument (DNM) headquarters in Dinosaur, Colorado.

The Cottonwood Draw Allotment is located approximately 17 miles from the DNM headquarters. The eastern and northern boundary of the allotment is bordered by NPS Harpers Corner Road. The western and southern boundaries of the allotment are fenced.

The allotment is a single pasture allotment with no current Allotment Management Plan (AMP). Elevation on the allotment ranges from 7,800 to 7,900 feet with average precipitation of 12-16 inches. Annual precipitation at the nearby DNM visitor center (Dinosaur, Colorado), whose elevation is lower at 5,935 feet, is 11.56 inches with the wettest months being April, May, and October.

Approximately 89% of the acreage on the allotment is deeded property owned by Marynell Snow. The table below is an acreage breakdown by land status for the Cottonwood Draw allotment.

Table 1: Acreage breakdown for the Cottonwood Draw Allotment.

Breakdown of Acres on the Cottonwood Draw Grazing Allotment (06301)					
Allotment		BLM Acres	State Acres	Private Acres	Total Acres
Name	Pasture				
Cottonwood Draw	1	143	0	1,062	**1,205**
	Total:	**143**	**0**	**1,062**	**1,205**

Grazing allotments within the Bureau of Land Management (BLM) White River Field Office (WRFO) have been placed in one of three management categories that define the intensity of management: (1) Improve, (2) Custodial and (3) Maintain. These categories broadly define rangeland management objectives in response to an analysis of an allotment's resource characteristics, potential, opportunities, and needs. Allotment categorization for the Cottonwood Draw Allotment is "Custodial".

The permittees acquired the base property for the Cottonwood Draw Allotment in 1978 from Terry Bastian and Dennis Mott. They use this allotment as a part of their cow/calf operation up on Blue Mountain in conjunction with allotments they have out of the BLM Vernal Field Office (VFO).

Proposed Action (Alternative A): Alternative A is for the renewal of Jon and Marynell's grazing permit (0501442) for a 10 year period as outlined in the proposed grazing permit table below.

Table 2: Alternative A proposed grazing permit

Allotment		Livestock		Grazing Period				
Number	Name	Number	Kind	Begin	End	%PL	Type Use	AUM's
06301	Cottonwood Draw	20	Cattle	6/1	6/30	12	Active	2
06301	Cottonwood Draw	275	Cattle	10/3	10/24	12	Active	24

Under this alternative the Cottonwood Draw Allotment would change from a season long allotment to a fall gathering pasture. The majority of summer use would take place on an adjacent grazing allotment managed out of the VFO and this allotment would just be used for gathering at the end of the season. On some years, the permittee will bring up to 20 yearlings onto the allotment in June for a brief period before they go over to the adjacent allotment.

Total AUM's associated with this alternative would be 219 down from 225 based on the previous grazing management. The BLM AUM's would be 26 based on the percent public land (%PL). The %PL is a percentage of BLM (Active) animal unit months (AUMs) in relation to total AUMs (BLM, Private). The %PL was recalculated during the permit renewal process and it was determined 12% of the total AUM's were on public land which is an increase from 8%.

Rangeland Improvements Necessary to Implement the Grazing System: No rangeland improvements (RI) are proposed to implement the grazing system. Future evaluations of allotment conditions may identify improvements that would aid in achieving objectives. In

which case, a separate Environmental Assessment (EA) would be compiled to approve any such new RI on a site specific basis.

Grazing Permit Terms and Conditions: The following terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

1. It is unlawful for the permittee, agents or employees to knowingly disturb or collect cultural, historical or paleontological materials on public lands. If cultural, historical or paleontological materials are found, including human remains, funerary items or objects of cultural patrimony, the permittee is to stop activities that might disturb such materials, and notify the authorized officer immediately.

2. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).

3. No grazing use can be authorized under this grazing permit/lease during any period of delinquency in the payment of amounts due in settlement for unauthorized grazing use.

4. Grazing use authorized under this grazing permit/lessee may be suspended, in whole or in part, for violation by the permittee/lessee of any of the provisions of the rules or regulations now or hereafter approved by the Secretary of the Interior.

5. This grazing permit/lease is subject to cancellation, in whole or in part, at any time because of:

    a. Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
    b. Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
    c. A transfer of grazing preference by the permittee/lessee to another party.
    d. A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
    e. Repeated willful unauthorized grazing use

6. This grazing permit/lease is subject to the provisions of executive Order No. 11246 of September 24, 1965, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.

7. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.

8. The authorized officer may require counting and/or additional/special marking or tagging of the livestock authorized to graze under this grazing permit/lease.

9. The permittee's/lessees grazing case file is available for public inspection as required by the Freedom of Information Act.

10. In order to improve livestock distribution on the public lands, all salt blocks and/or mineral supplements will not be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated though a written agreement or decision in accordance with 43 CFR 4130.3-2(c).

11. In accordance with 43 CFR 4130.8-1(F): Failure to pay grazing bills within 15 days of the due date specified in the bill shall result in a late fee assessment. Payment made later than 15 days after the due date, shall include the appropriate late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR Sec. 4140.1(b) (1) and shall result in action by the authorized officer under 43 CFR Sections. 4150.1 and 4160.1-2 (Trespass).

Monitoring and Evaluation: There is one trend site located on the Cottonwood Draw Allotment, and BLM WRFO was unable to locate it in the summer of 2009. Land health assessments along with utilization measurements were conducted in the summer of 2009, and a new trend site will be established and monitored as closely as possible to the original trend site in the future.

Alternative B (Continuation of Current Management): This alternative would be a continuation of current grazing management on the Cottonwood Draw grazing Allotment. The grazing schedule is outlined in the table 3 below. The % PL, which is the percentage of BLM (Active) AUMs in relation to total AUMs (BLM, Private), was recalculated for the Cottonwood Draw Allotment. Based on a recalculation of the AUM's, the %PL would be 12%. This adjustment of the %PL will not influence the number of livestock or the beginning or end dates of the grazing season, thus there will be no affect on BLM analysis.

Table 3: Alternative B Proposed Grazing Permit

Allotment		Livestock		Grazing Period				
Number	**Name**	**Number**	**Kind**	**Begin**	**End**	**%PL**	**Type Use**	**AUM's**
06301	Cottonwood Draw	56	Cattle	6/1	9/30	12	Active	27

Rangeland Improvements Necessary to Implement the Grazing System: No new RI's are needed to continue this management. Future evaluations of allotment conditions may identify improvements that would aid in achieving objectives. In which case, a separate EA would be compiled to approve any such new RI on a site specific basis.

Grazing Permit Terms and Conditions: The following terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

1. It is unlawful for the permittee, agents or employees to knowingly disturb or collect cultural, historical or paleontological materials on public lands. If cultural, historical or

paleontological materials are found, including human remains, funerary items or objects of cultural patrimony, the permittee is to stop activities that might disturb such materials, and notify the authorized officer immediately.

2. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).

3. No grazing use can be authorized under this grazing permit/lease during any period of delinquency in the payment of amounts due in settlement for unauthorized grazing use.

4. Grazing use authorized under this grazing permit/lessee may be suspended, in whole or in part, for violation by the permittee/lessee of any of the provisions of the rules or regulations now or hereafter approved by the Secretary of the Interior.

5. This grazing permit/lease is subject to cancellation, in whole or in part, at any time because of:

    a. Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
    b. Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
    c. A transfer of grazing preference by the permittee/lessee to another party.
    d. A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
    e. Repeated willful unauthorized grazing use

6. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1965, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.

7. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.

8. The authorized officer may require counting and/or additional/special marking or tagging of the livestock authorized to graze under this grazing permit/lease.

9. The permittee's/lessees grazing case file is available for public inspection as required by the Freedom of Information Act.

10. In order to improve livestock distribution on the public lands, all salt blocks and/or mineral supplements will not be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated though a written agreement or decision in accordance with 43 CFR 4130.3-2(c).
11. In accordance with 43 CFR 4130.8-1(F): Failure to pay grazing bills within 15 days of the due date specified in the bill shall result in a late fee assessment. Payment made later

than 15 days after the due date, shall include the appropriate late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR Sec. 4140.1(b) (1) and shall result in action by the authorized officer under 43 CFR Sections. 4150.1 and 4160.1-2 (Trespass).

Alternative C (No Grazing Alternative): The grazing permit would not be renewed and there would be no livestock grazing on public lands within the Cottonwood Draw Allotment where it is currently permitted. This alternative would not be in compliance with the White River ROD/RMP decision to provide for livestock grazing as one of the acceptable multiple uses.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: The purpose of the Proposed Action is to manage multiple uses on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-22 through 2-26

Decision Language: With minor exceptions, livestock grazing will be managed as described in the 1981 Rangeland Program Summary (RPS). That document is the Record of Decision for the 1981 White River Grazing Management Final Environmental Impact Statement (Grazing EIS).

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an EA. These findings are located in specific elements listed below:

Table 4: Standards for Public Land Health

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Achieving or Moving Towards Achieving	Not Achieving	Causative Factors	Achieving or Moving Towards Achieving	Not Achieving	Achieving or Moving Towards Achieving	Not Achieving
#1-Upland Soils							
Cottonwood Draw	138	3	Not Sufficient Cover due to Areas of High Cattle Congregation	139	2	139	2
	2% of Public Land			1.5% Public Land		1.5% Public Land	
#2-Riparian Systems							
Cottonwood Draw	0	0	No Riparian	0	0	0	0
#3-Plant Communities							
Cottonwood Draw	138	3	Grazing Use Cheatgrass	139	2	139	2
	2% of Public Land			Some Will Need Mechanical Treatment (Crossed Threshold)		1.5% Public Land	
#4-Special Status, T&E Species							
Cottonwood Draw	138	3	Cattle Trailing in Areas of Common Congregation	139	2	139	2
	0		Lack of Ground Cover for Nesting and Brood Rearing (Cheatgrass)				
#5-Animal Communities							
Cottonwood Draw			Cheatgrass				
	2% Public Land			1.5% Public Land		1.5% Public Land	
#6-Water Quality							
Cottonwood Draw	0	0		0	0	0	0

NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES

AIR QUALITY

Affected Environment: This Proposed Action is located in rural northwest Colorado in the White River Basin. Industrial facilities in White River Basin include coal mines, soda ash mines, natural gas processing plants and power plants. Due to these industrial uses, increased population and oil and gas development in this region, emissions of air pollutants in the White River Basin due to exhaust emissions and dust (particulate matter) are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are likely to continue to be good for some time to come due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area. The WRFO resource area has been classified as either attainment or unclassified for all air pollutants, and most of the area has been designated for the prevention of significant deterioration (PSD) Class II for Dinosaur National Monument.

Environmental Consequences of the Proposed Action (Alternative A): The environmental consequences to air quality from Alternative A would include the periodic and local production of dust due to cattle trailing to and from forage, water and nutrient sources. The most likely time for increased dust production due to approved activities will be during periods of the day (typically morning and evening) when cattle move to water, forage and/or to nutrient sources, between pastures and onto and off of the allotment. Dust levels may be noticeable locally and especially during drier times. The Colorado Air Pollution Control Division (APCD) estimates the maximum PM_{10} levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter ($\mu g/m^3$). This alternative is not likely to exceed this western Colorado dust standard.

Environmental Consequences of Continuation of Current Management (Alternative B): Impacts from the continuation of current management alternative would be the same as Alternative A.

Environmental Consequences of the No Grazing Alternative (Alternative C): Air quality as a result of the no grazing alternative would result in no dust production due to grazing activities.

Mitigation: None

SOILS (includes a finding on Standard 1)

Affected Environment: The tables below are a breakdown of soil units and associated ecological sites for BLM administrated lands on the Cottonwood Draw Allotment. Maps of both ecological sites and soil mapping units within the allotment are attached. Soils analyzed in this document have been covered in the Moffat County Soil Surveys.

Table 5: Soil unit breakdown on BLM lands within the Cottonwood Draw Allotment

Cottonwood Draw Soil Units		
Soil Unit	**Ecological Site**	**BLM Acres**
Emlin loam, 1-12%slope	Deep Loam	66
Layoint-Moosed-Berlake complex, 1-20%slope	Sandy Foothill	75
Ustorthents, frigid-Borolls complex, 25-75%slope	---	2
	Total	**143**

Soil objectives of the White River ROD/RMP are to prevent impairment of soil productivity due to accelerated erosion and physical or chemical degradation resulting from surface use activities, such as grazing. Management actions will be designed to support the goals provided as indicators in Standard One of the Standards for Public Land Health.

Public Land Health assessments were conducted on all public lands within the allotment. Rangelands were evaluated and the majority of soils are meeting Public Land Health Standards. There are approximately 3 acres not meeting standards on the allotment. Soil located in the mid-seral vegetative communities (See Table 7 in the vegetation section) has potential for decline in stability without proper management. These situations warrant concern for overall soil sustainability. In areas that are not meeting soil standards, there is insufficient vegetative cover to protect the soil from wind and water erosion. These conditions do not allow for appropriate water infiltration and soil permeability (Guideline 3).

Soils that are vegetated with plant communities rated as early seral do not have sufficient diversity and/or cover of native plant species to provide effective ground cover to prevent excessive overland flow, runoff, and general soil degradation. These early seral soils are experiencing a certain degree of erosion as evidence by plants on soil pedestals, sheet flow erosion, excessive overland flow, disproportionate sediment movement, minor expression of rills, and some areas with active gully erosion.

Soils that are vegetated with plant communities rated as mid seral, late seral, or Potential Natural Community (PNC) have sufficient cover of desirable plant species to produce adequate litter and ground cover to minimize runoff and provide for soil protection. Therefore, these soils are meeting Colorado Public Land Health Standards for upland soils.

A portion of the mid and late seral sites (currently meeting health standards) are experiencing a transitional shift in ground cover to less desirable plant communities (e.g., cheatgrass) that lack the ability to resist erosion. These plants with small shallow root structures allow increased overland flows and reduce the soil surface resistance to erosion (see Vegetation section).

Environmental Consequences of the Proposed Action (Alternative A): The Colorado Standards for Public Land Health have been evaluated on the grazing allotment associated with this permit renewal and it has been determined that the majority of sites not meeting standards are a direct result of surface disturbance from various projects such as roads, or range improvement construction, or around areas of common cattle congregation. The Proposed

Action will authorize minimal grazing during the critical growth period and therefore provide adequate cover of desirable plant species to produce adequate litter and ground cover to minimize runoff and provide for soil protection.

Environmental Consequences of Continuation of Current Management (Alternative B): The grazing schedule for the continuation of current management alternative authorizes more grazing during the spring critical growing season, which would reduce recovery and/or re-growth periods, as well as reduce the opportunity for seed dispersal and seedling establishment that is critical for adequate soil protection.

However, current grazing management practices do not appear to result in high utilization levels (See vegetation section) on the uplands and in general soils appear to be protected from wind and water erosion. If this alternative is implemented, continued monitoring would be essential to determine the effects of increased grazing during the critical growth period, and maintain lands that are currently meeting Colorado Standards for Public Land Health.

Environmental Consequences of the No Grazing Alternative (Alternative C): No grazing by livestock would fully address Colorado Livestock Grazing Management Guidelines for soil stability, simply because the allotment would receive no grazing pressure from livestock. Deer and elk use would continue to occur and they would utilize forage resources within these rangelands.

Under a no grazing alternative, most areas that are being grazed by cattle would experience an increase in both perennial plant cover and soil surface litter accumulation. Mid seral ecological sites would likely experience the greatest benefit of increased perennial plant cover and would continue to meet Public Land Health Standards. Some mid seral sites are on a threshold for degradation with improper livestock practices. That trend would be halted without grazing.

On some early seral ecological sites dominated by cheatgrass, removal of livestock grazing pressure would not produce a shift back toward perennial plant cover on most acres because they have crossed a threshold to annual plant domination (highly competitive). Yet, other early seral areas that still have native perennial plants present in the plant community would experience a favorable shift in composition resulting in improved soil stability under the no grazing alternative.

Soils associated with late and PNC ecological sites would continue to meet standards for public land health and experience minimal changes in plant species composition and diversity.

Overall, under the no grazing alternative soil objectives outlined in the White River ROD/RMP and Public Land Health Standards would be addressed with benefits to ground cover. Improvements would occur due to increased residual vegetation in the uplands effectively protecting soils from wind and water erosion. Increased establishment of deeper rooted native perennial grasses would also result in improved water infiltration into the soil, therefore maintaining a higher level of soil moisture and increased soil stability throughout the renewal area.

Mitigation: None

Finding on the Public Land Health Standard for upland soils: Soils that occupy early seral plant communities are mostly not meeting the Standards due to the lack of ground protection caused from a lack of desired composition of vegetation and a lack of residual plant litter. All other soils within the allotments are currently meeting standards and make up the majority of acres on the permit renewal area, however portions of these acres are on a threshold for downward trend with improper livestock grazing management.

Implementation of the Proposed Action or no grazing alternative will improve the ability of rangelands to progress toward meeting and/or continue to meet Public Land Health Standards on the Cottonwood Draw Allotment.

Implementation of the current management alterative would likely maintain the current areas of the allotment that are meeting land health standards, but continued monitoring would need to be done to determine if mid-seral sites are continuing to meet land health standards.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of and there are no known solid waste dump sites in the allotment.

Environmental Consequences of the Proposed Action (Alternative A): No listed or extremely hazardous materials are proposed for use in this project. All applications of pesticides would be in compliance with BLM requirements.

Environmental Consequences of the Continuation of Current Management (Alternative B): No listed or extremely hazardous materials are proposed for use in this project. All applications of pesticides would be in compliance with BLM requirements.

Environmental Consequences of the No Grazing Alternative (Alternative C): No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: Contact the BLM WRFO Hazardous Materials Coordinator at (970) 878-3800 and/or the Colorado Department of Public Health and Environment (CDPHE) through the 24-hour spill reporting line at 1(877)518-5608, if the permittee suspects the release of any chemical, oil, solid waste, petroleum product, or sewage within the allotment.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: This allotment only contains 12% BLM land and has good water due to at least 5 reservoirs. Most of this allotment is in a basin and only a few locations have steep slopes. The location of this steep country is not likely to be used by grazing livestock.

Environmental Consequences of the Proposed Action (Alternative A): The Proposed Action will generally change the duration of grazing in most pastures and decrease the intensity and duration of grazing. This management approach may improve use by giving vegetation a chance to reestablish during the growing season, since the only use will be in the fall besides the brief trailing in June.

Grazing removes vegetation that may help reduce rain splash erosion, lessen surface runoff and livestock often preferentially remove grass and forb species that form root masses that hold together soil matrices better than non-desirable species. This may lead to a vegetation shift to grasses and forbs that are not as beneficial to water quality. Hoof action from trailing to and from water, nutrient and forage sources as well as travel through pastures create preferential flow paths that can concentrate overland flow and intercept subsurface flows. These impacts will be assessed and changes to the permit conditions may occur during yearly range management modifications to address specific situations. With good grazing management impacts are not expected beyond those typically experienced on public lands.

Concentrated use will occur around reservoirs, most of these are located on private lands. Impacts from cattle use include compaction and direct impacts to vegetation from grazing. The benefit of well distributed livestock grazing use possible with reservoirs would be increased vegetation cover throughout a given watershed and reduced localized livestock impacts.

Environmental Consequences of Continuation of Current Management (Alternative B): Impacts from the continuation of current management are similar to those analyzed in alternative A.

Environmental Consequences of the No Grazing Alternative (Alternative C): Nonuse of this area for grazing would generally improve water quality as compared to the Proposed Action.

Mitigation: None

Finding on the Public Land Health Standard for water quality: Implementation of any of the three alternatives would not result in Colorado water quality standards being exceeded.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: There are not wetlands or riparian zones located on BLM lands within the Cottonwood grazing Allotment.

Environmental Consequences of the Proposed Action (Alternative A): No consequences.

Environmental Consequences of Continuation of Current Management (Alternative B): No consequences.

Environmental Consequences of the No Grazing Alternative (Alternative C): No consequences.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: There are no riparian systems within the grazing allotment.

VEGETATION (includes a finding on Standard 3)

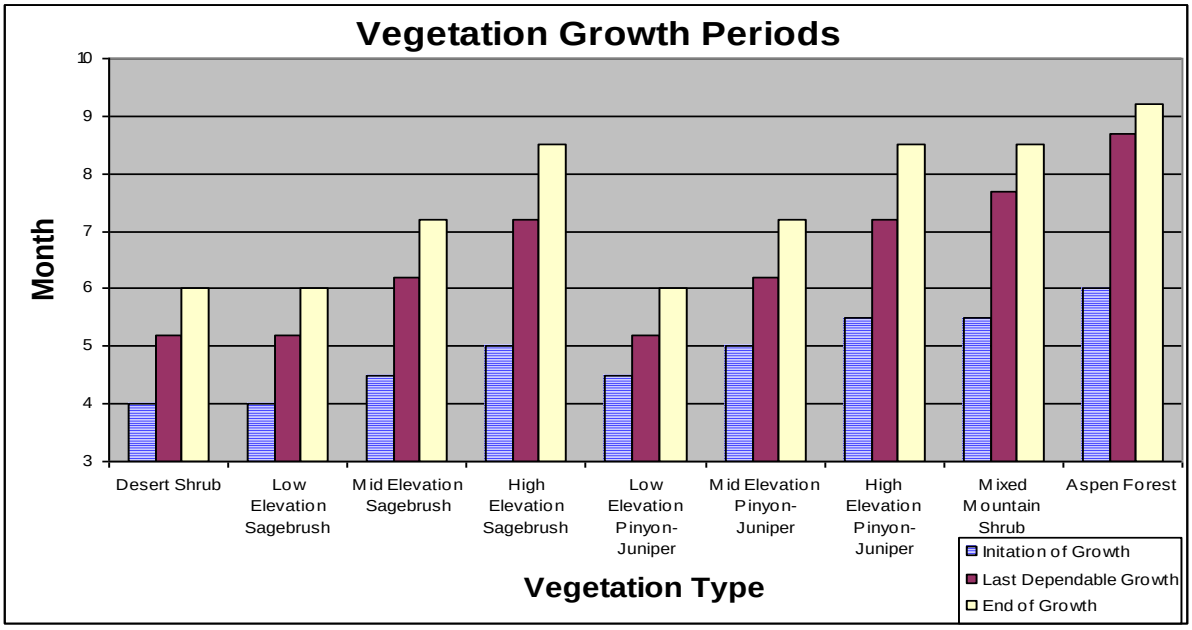
Affected Environment: The following table lists the plant community appearance for the ecological sites or woodland types on the allotment associated with the Proposed Action, along with the predominant plant species comprising the composition of each community. Forb species, though important to the diversity of a community and making up to 25 to 30% of the composition of several of the plant communities listed, are not presented in the following table because they generally are not contributors to the appearance or dominance of the community.

Table 6: Breakdown of ecological sites within the Cottonwood Draw Allotment

Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community	Acres
Deep Loam	Grassland	Bluebunch wheatgrass, muttongrass, needle-and-thread, western wheatgrass, slender wheatgrass, big sagebrush, serviceberry, snowberry.	462
Mountain Loam	Grass/Open Shrub Shrubland	Mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, bitterbrush, low rabbitbrush, snowberry, serviceberry	136
None	Rock Outcrop, Water, Wasteland	N/A	44
Dry Mountain Loam	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, horsebrush, bitterbrush, western wheat grass, Indian rice grass, squirreltail, June grass, Nevada and Sandberg bluegrass	15
Sandy Foothills	Grassland	Bluebunch wheatgrass, muttongrass, needle-and-thread, western wheatgrass, slender wheatgrass, big sagebrush, serviceberry, snowberry.	549

The chart below is a representation of the vegetation growth periods for different vegetation types found on the Cottonwood Draw Allotment. These dates are based upon estimated averages and can vary from year to year dependent upon climatic conditions.

Figure 1: Average vegetation growth periods on the Cottonwood Draw Allotment



The following table shows the seral rating used by the BLM to rate rangeland vegetation communities in comparison to the Potential Natural Plant Community (PNC) for a particular ecological site.

Table 7: Ecological site rating breakdown

ECOLOGICAL SITE SIMILARITY RATINGS	
Seral Rating	**% Similarity to the Potential Natural Plant Community (PNC)**
Potential Natural community (PNC)	76-100% composition of species in the PNC
Late-Seral	51-75% composition of species in the PNC
Mid-Seral	26-50% composition of species in the PNC
Early-Seral	0-25% composition of species in the PNC

The following table shows an estimate of the public land acreage falling within one of the seral ratings for each ecological site on allotments associated with this permit renewal. Nearly all ecological sites were visited during the 2009 field seasons for a plant community assessment of the Colorado Public Land Health Standards for each allotment.

Table 8: Breakdown of seral ratings on BLM lands within the Cottonwood Draw Allotment

Cottonwood Draw Ecological Site Similarity Rating

Ecological Site	Total BLM ACRES	PNC	Late Seral	Mid Seral	Early Seral (Not Meeting Standards)	BLM Acres Classified
Deep Loam	66	10	26	29	1	**66**
Sandy Foothill	75	14	28	31	2	**75**
None	2	N/A	N/A	N/A	N/A	**0**
Total:	**143**	**24**	**54**	**60**	**3**	**141**
% BLM Acres Classified:		**17%**	**38%**	**43%**	**2%**	

As shown within the Cottonwood Draw Allotment, 98% of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (mid to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet foraging demands. Two acres within the allotment are within unclassifiable seral stages such as rock outcrops and steep slopes. These acres are generally within an acceptable land health standard status due to the low impact from livestock and/or wildlife.

Many acres of the mid/late seral communities have a higher composition of mountain big sagebrush (*Artemisia tridentate spp. vaseyana*) and encroaching pinyon and juniper trees into the sagebrush communities which has resulted primarily from a lack of a natural fire regime and from grazing influences. The early seral communities not meeting Public Land Health Standards in the Cottonwood Draw Allotment are primarily in areas of disturbance or areas of common livestock congregation such as along roadsides, fence-lines, and water developments. Overall, early seral communities not meeting the Colorado Public Land Health Standards are due to concerns/lack of species diversity, soil protection, and/or forage production. However, the majority of these early seral areas not meeting Public Land Health Standards have crossed a threshold of annual plant domination whose condition would not significantly change with or without livestock grazing.

For the past two years (2009 and 2010) there has been good spring moisture during the critical growing season to aid in forage/seed production on rangelands. There have also been average amounts of precipitation in the fall, (August and September) to aid in plant re-growth and act as a spring board into the next growing season. The moisture over the last two years has resulted in favorable conditions for livestock grazing. However, if moisture decreases in the future, changes in annual grazing authorizations may need to take place to adjust for the lack of timely moisture and prevent degradation to rangelands over time. Precipitation levels should always be taken into account when developing and annual use authorization for livestock grazing.

Environmental Consequences of the Proposed Action (Alternative A): Under the Proposed Action, there would be a small decrease of 6 AUM's. This decrease is nominal compared to the total number of AUM's approved on the allotment, and would have little effect on utilization within the allotment. Previous utilization studies indicate use levels within the 1997 RMP guidelines, and this is not expected to change under the Proposed Action.

The primary benefit of the alternative is that most of the use would occur in the fall. This will provide ample opportunity during the critical growing season for vegetation to go to seed and increase plant vigor. Currently, the minimum rest requirements outlined in the 1997 RMP/ROD is from 4/10 to 6/20 once every three years. Under the Proposed Action, the permittee has the opportunity to put 20 yearlings on the allotment from 6/1 to 6/30. This would not fully meet White River ROD/RMP rest requirements, but use in the spring time at this level would be very light and is not anticipated to have a large impact on vegetation during the critical growing season.

Environmental Consequences of Continuation of Current Management (Alternative B): The continuation of current management alternative would increase the amount of spring use within the allotment. As mentioned above, the 1997 RMP/ROD has a minimum rest requirement from 4/10 to 6/20 once every three years. This alternative is close to meeting that requirement, but there would be livestock on the allotment 20 days early at a moderate level. This could have some minimal effects on vegetative vigor and seed-head production. Previous utilization levels measured on the allotment have fallen within the 40-60% levels outlined in the RMP, and this is not expected to change under this alternative.

Environmental Consequences of the No Grazing Alternative (Alternative C): Under a no grazing by livestock alternative, most localities that are being grazed by cattle would experience a short-term increase in both perennial plant cover and soil surface litter accumulation. Mid seral ecological sites would likely experience the greatest benefit of increased perennial plant cover. On early seral ecological sites such as the monocultures of sagebrush or on rangelands dominated by cheatgrass, the majority of areas are not expected to change in perennial plant cover because they have crossed a threshold of total sagebrush and/or annual plant domination. The PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* The early seral communities are mostly not meeting the standards due to the significant composition of cheatgrass, an invasive annual grass (2 acres). In general these areas have crossed a transitional threshold and will continue to not meet standards regardless of grazing. All other seral communities (Mid – PNC) are currently meeting standards and make up the bulk of classified acres on all allotments (141acres). Implementation of the Proposed Action or alternative A will enhance/maintain the ability of the rangelands to meet the Standards in the future. The no grazing alternative will also enhance and maintain the ability of rangeland communities to meet land health standards. Mid-seral sites that are on the border for not meeting standards would receive the greatest benefit from no grazing as there would be a flush of native cool-season perennial grasses on these areas and improved plant vigor, and seed-head formation.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: There are no known infestations of Colorado List A or B noxious weed species within the Cottonwood Draw Allotment. There is a known infestation of Russian knapweed (*Acroptilon repens)* and diffuse knapweed (*Centaurea diffusa*) on the allotment just south of the Cottonwood Draw Allotment on the west end of Stuntz Ridge, and there is known occurrences of musk thistle (*Carduus nutans*) within the Robinson pasture of the Basin Springs grazing allotment just to the east.

Cheatgrass is an invasive, non-native annual identified as a List C species on the state of Colorado noxious weed list that is scattered throughout the allotment along roadsides and in areas of common cattle congregation. Its presence is limited to areas of disturbance such as around roads or around livestock ponds. No other known invasive weeds are known to exist on BLM lands within the Cottonwood Draw Allotment.

Environmental Consequences of the Proposed Action (Alternative A): Areas where cheatgrass has crossed a transitional threshold and is essentially at a stationary plant community will not undergo any change as a result of livestock management. Without a human induced disturbance such as fire or herbicidal treatment to remove cheatgrass dominance, accompanied by seeding of adapted perennial grasses to preempt the return to cheatgrass dominance, it is likely to remain in its present state.

The Proposed Action alternative offers the best potential to maximize vigor of the grass component of the various ecological sites involved on BLM administrated lands. These sites will be more resilient to invasion by undesirable species. While noxious weeds readily invade rangelands at all seral stages, the rate and extent of invasion would be much less for mid and late seral rangelands with a vigorous, competitive compliment of perennial grasses, shrubs, and forbs.

Livestock can act as a vector for noxious/non-native seed due to the ability of seeds to attach to animal fur or be transported in animal feces. This could increase the possibility of new weeds to be introduced to the allotment when cattle are brought from private lands or neighboring grazing allotments.

Environmental Consequences of Continuation of Current Management (Alternative B): Alternative B has some increased use during early June compared to Alternative A. This creates increased potential for reduced plant vigor of native plants, and decreases native plant communities' ability to prevent invasion of non-native/noxious weeds. Invasive/noxious plants have the ability to invade all types of plant communities, but the more degraded a plant community is as a result of livestock grazing, the higher the likelihood of successful invasion by invasive/non-native species.

Livestock can still act as vector for seeds which would increase the possibility of new weeds to be introduced to the allotment.

Environmental Consequences of the No Action Alternative (Alternative C): No grazing would allow full growth potential of the vegetative community after being grazed by deer and elk. A robust plant community is more resistant to the invasion of invasive, non-native species

and would therefore reduce the risk of spreading or introduction new invasive/non-natives in the area.

Mitigation: None

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: There are no plant species listed, proposed, or candidate to the Endangered Species Act, nor plants considered sensitive by the BLM, that are known to inhabit areas influenced by the Proposed Action.

Environmental Consequences of the Proposed Action (Alternative A): The Proposed Action should have no conceivable influence on special status species or associated habitats.

Environmental Consequences of Continuation of Current Management (Alternative B): Continuation of current management should have no conceivable influence on special status species or associated habitats.

Environmental Consequences of the No Action Alternative (Alternative C): There would be no action authorized that would have potential to influence special status species or associated habitats.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed and no-action alternatives should have no influence on populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, would have no influence on the status of applicable land health standards.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: No threatened or endangered animal species listed under the Endangered Species Act (ESA) are known to inhabit or derive important use within the Cottonwood Draw Allotment. On 5 March 2010, the USFWS concluded that the greater sage-grouse warranted listing as an endangered species under the Endangered Species Act, but that listing was precluded by the need to complete listing actions of higher priority. Range-wide, this species is considered a candidate for listing, a designation that affords management attention equivalent to that of species considered "sensitive" by the BLM.

The high elevation sagebrush communities provide habitat for sage-grouse during the breeding, nesting, and brood-rearing periods. In Colorado, research has demonstrated that 52% of sage-grouse nests are within 2 miles of an active lek and 80% of nests are within 4 miles of an active

lek (CCP 2008). Two active leks are located outside of the allotment, but within one mile (~0.9 miles) of public parcels and as such likely provide important nesting habitat (mid-April through June). Generally (i.e. across their range), nesting habitat is considered sagebrush stands where there is 15-25% sagebrush cover and at least 25% grass and forb cover. Additionally, sagebrush heights are typically 16-32 in (41-81 cm) and grass and forb heights at least 7 in (18 cm) (Connelly et al. 2000). In Colorado, the average sagebrush canopy cover at nest sites was 27% and average sagebrush height was 30-32 in (76-81cm). Grass height at nests in Colorado was 5-6 in (13-15 cm) and cover was 4-7% for the herbaceous understory (CCP 2008). The herbaceous understory is an important component of breeding habitat because it provides a high protein forb diet for hens (which can positively influence clutch size and chick survival) (CCP 2008) and it can provide scent, physical, and visual barriers at nest sites to potential predators (Connelly et al. 2000). Early brood-rearing habitat is essentially the same as nesting habitat. However, as the summer progresses and the herbaceous understory begins to dry out, many broods move into more mesic areas and wet meadows.

Environmental Consequences of the Proposed Action (Alternative A): Under the proposed grazing schedule livestock use would almost entirely be confined to the fall months (10/3 – 10/24) in most years. A small number of livestock (20) would be permitted to graze during the month of June in some years. This grazing system would result in a 64% - 100% decrease in livestock use during the sage-grouse nesting and brood-rearing season. Consequences of this alternative would be the same as those discussed in the Migratory Bird section. Improvements/increases in understory composition, vigor and height would be compatible with maintenance of sage-grouse nesting and brood-rearing conditions.

Environmental Consequences of Continuation of Current Management (Alternative B): Under this alternative livestock would be allowed to graze throughout nearly all of the nesting and brood-rearing season. Season-long use, particularly through the critical growing season can reduce plant vigor, alter the composition (often time shifting towards less desirable species), and decrease vertical height. This does not appear to be the case with the Cottonwood Draw allotment as there appears to be considerable vegetative cover containing a strong perennial and forb component with a diverse understory of desirable species (based on allotment inspection June 2010). Overall, the current grazing system appears to be compatible with sage-grouse nesting and brood-rearing activities.

Environmental Consequences of the No Action Alternative (Alternative C): Removal of livestock from the Cottonwood Draw Allotment would likely result in increased vertical height and vigor of the herbaceous understory. These improvements would likely be most noticeable in areas that currently receive heavy use (i.e., near water sources). Increased plant vigor, particularly of forb species commonly found around these small water sources (e.g., dandelion, yarrow etc.), would provide an additional forage source for adults and chicks during the brood-rearing period. Similarly, improvements in herbaceous understory (height and density) would enhance nesting conditions throughout the allotment as a whole.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: With the exception of approximately 3 acres (~2% of BLM administered lands in the allotment) that is classified as early seral, the Public Land Health Standards for greater sage-grouse are currently being met. The proposed grazing schedule would not impede continued maintenance of these standards. There is no evidence to suggest that current grazing practices are aggravating deficiencies in the utility or available extent of habitats available for sage-grouse nesting and brood-rearing.

MIGRATORY BIRDS

Affected Environment: The 144 acres of BLM lands within the Cottonwood Draw Allotment are predominately a mix of big sagebrush, mountain shrub (serviceberry, snowberry and bitterbrush) and grassland habitats. Brewer's sparrow, meadowlark, sage thrasher, Vesper's sparrow, green-tailed towhee, spotted towhee, and Virginia's warbler are just a few species that commonly nest in these communities during the breeding season (mid-May through mid-July). Birds of high conservation interest recognized by the U.S. Fish and Wildlife Service (USFWS) include: Brewer's sparrow, sage thrasher and green-tailed towhee. Species associated with these habitats are well represented in the permit area and the Resource Area in general. There are no specialized or narrowly endemic species known to inhabit the allotment.

Environmental Consequences of the Proposed Action (Alternative A): Under the proposed grazing schedule livestock use would change from season long grazing (June through September) to a three week period during the month of October. In some years, a small number (20) of yearlings may use the allotment during June. Under this schedule, livestock use in most years would not coincide with or have potential to directly influence migratory bird nesting activities. High intensity fall use will likely reduce the amount of residual component however; herbaceous ground cover should have sufficient time to develop prior to subsequent years nesting activities.

In those years when grazing is synchronous with the nesting season, use would be reduced by 64% from current management. While there is potential (nearly discountable with only 20 head on 1200 acres) for livestock grazing to directly impact nesting success (e.g., nest trampling), such a substantial reduction of use during the critical growing season will indirectly benefit many species by providing for sustained improvements in the composition (promotion of native perennial species), vigor, and density of herbaceous ground cover in addition to enhancing the insect forage base.

Environmental Consequences of Continuation of Current Management (Alternative B): Continuation of the current grazing system would allow for light to moderate use throughout the growing season and consequently the migratory bird nesting season. Season long use often results in a reduction in plant vigor and vegetation height, reducing the forage and cover resources available to birds during the nesting and brood-rearing season. Overall, it is believed that the current management is predominantly compatible with the nesting activity of migratory birds associated with habitats available in the allotment. Allotment inspections conducted on June 1, 2010 (prior to livestock turnout) did not indicate any substantial reductions in vegetative cover. Plant communities within the BLM administered parcels appeared to be well intact with a

strong perennial grass and forb component. Annual species (i.e., cheatgrass), which were relatively uncommon were most noticeable in disturbed areas along roadways.

Environmental Consequences of the No Action Alternative (Alternative C): It is expected that livestock removal would lead to minor increases/improvements in vertical structure, composition and density of herbaceous understory on the allotment as a whole from current conditions. Benefits associated with livestock removal would be most expected in those areas that currently experience concentrated livestock use (areas in close proximity to a water source which, generally are located on privately owned land) and on the small percentage of early seral sites. These changes however, are not expected to differ markedly from the proposed grazing schedule as use, for the most part, would be confined to the dormant season. Response by migratory birds to vegetative changes would depend on the species, likely providing the greatest benefit to ground and low shrub nesters (e.g., western meadowlark, Brewer's sparrow, Vesper's sparrow, and green-tailed towhee).

Mitigation: None

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: There are no aquatic systems on BLM-administered lands within the allotment which are capable of supporting simple or higher-order aquatic wildlife.

Environmental Consequences of the Proposed Action (Alternative A): The Proposed Action would have no conceivable influence on aquatic wildlife or associated habitat.

Environmental Consequences of Continuation of Current Management (Alternative B): Continuation of the current grazing system would have no conceivable influence on aquatic communities.

Environmental Consequences of the No Action Alternative (Alternative C): There would be no action authorized that would have any direct or indirect influence on aquatic communities.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): There are no BLM-administered aquatic habitats within the allotment and therefore, the Proposed Action would have no potential for influencing aquatic attributes addressed in the Standards.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The higher elevation Wyoming big sagebrush, mountain shrub (bitter brush, snowberry and serviceberry), and grassland communities are categorized as general

winter range for big game (both mule deer and elk). These ranges generally receive the heaviest use during the late fall (September through December).

While raptors likely opportunistically forage throughout the area, BLM administered lands within the allotment lack suitable woodland habitat (aspen, spruce-fir, piñon-juniper) which provide nest substrate for woodland raptor species. There are no cliffs or rock outcrops which may provide nesting substrate for golden eagle or red-tailed hawks.

Limited information exists on small mammal use and distribution within the allotment; however it is suspected that nongame species using the allotment's habitats are typical and widely distributed in extensive like habitats across the resource area and northwest Colorado. Small mammal sampling conducted in the summer of 2010 (confined mainly to the Piceance Basin) indicates deer mice to be the most common species in sagebrush habitats. Voles were found to be uncommon in these sites; however, his may be a factor of trapping methods rather than abundance as voles were often visually observed at the sampling sites.

Environmental Consequences of the Proposed Action (Alternative A): The Proposed Action would result in an approximately 64% - 100% decrease in livestock use during the critical growing season, depending on the year. This would allow for an increase in plant vigor and amount of residual ground cover. Substantial reductions in livestock use during the growing season would likely provide the greatest benefit to small and/or nongame mammals and birds. Increases/improvements in ground cover and litter would likely prompt shifts in small mammal community composition, benefiting species which require well developed understories (e.g. voles) rather than species tolerating more open understories.

Under the proposed grazing schedule livestock use would coincide with a portion of the big game use period. Heavy fall use by livestock (10/3 – 10/24) would likely have the most noticeable impact on elk as they tend to make the greatest use of herbaceous cover throughout the season. Concurrent use for such a short time frame is not expected to negatively influence elk populations or detract considerably from available forage and cover resources. Typically by the fall months, deer have shifted to a forage base more reliant on woody species (e.g., serviceberry). Fall grazing by livestock is not anticipated to negatively influence mule deer populations.

Environmental Consequences of Continuation of Current Management (Alternative B): Under the current grazing system livestock use would consist of light to moderate use during the entire growing season. Season long use can lead to reductions in plant vigor, height and litter amount, depending on how light/heavy the use. This may decrease the amount of forage and cover resources available to nongame species. Allotment inspections conducted in June of 2010 did not indicate any substantial reductions in ground cover. Public parcels within the allotment were comprised of perennial grass species with a strong forb component. Very little annual species were present.

Currently livestock use, for the most part does not coincide with those periods of heaviest use by big game. Season long use would be expected to reduce the amount of herbaceous cover available to big game during the fall and early winter months. Reductions in herbaceous cover

would have the greatest potential to influence elk as they tend to rely on herbaceous forage throughout much of fall and winter. In this area, current livestock grazing does not appear to be negatively influencing elk since elk populations are considerably above Colorado Division of Wildlife's (CDOW) desired herd objective. Current livestock use does not appear to be negatively impacting mule deer as they have generally shifted their diet from an herbaceous to a woody component by the fall and winter months.

Overall, the current grazing system appears to be compatible with continued support of both big game and nongame species.

Environmental Consequences of the No Action Alternative (Alternative C): Removal of livestock would be similar to the consequences discussed in Alternative A. The most noticeable response would likely be from non-game mammals and bird populations, who would benefit with increasing vegetative cover, forage and litter cover. Based on allotment inspections conducted in June, herbaceous cover appeared satisfactory and it is suspected that small mammal and bird populations are currently near potential across much of the allotment. Although improvements in perennial composition and vigor would be anticipated, this is not expected to have any effective influence on the continued support of big game. Livestock removal would be expected to reduce use of heavy bunchgrass top growth, which would tend to slightly reduce big game access to grass growth in the spring, particularly by deer.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): With the exception of approximately 3 acres (~2% of the allotment) that is classified as early seral, the allotment currently meets the Land Health Standard for terrestrial wildlife at the landscape level. The proposed grazing schedule would not impede continued maintenance of these standards. There is no evidence to suggest that current grazing practices are aggravating deficiencies in the utility or available extent of wildlife habitat.

CULTURAL RESOURCES

Affected Environment: Range permit renewals are undertakings under Section 106 of the National Historic Preservation Act. Range improvements associated with the allotment (e.g., fences, spring improvements) are subject to compliance requirements under Section 106 and will undergo standard cultural resources inventory and evaluation procedures. During Section 106 review, a cultural resource assessment (#10-050) was completed for the allotment on 1/4/2010 following the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, and IM-CO-01-026. In addition, a Class II (sample) inventory of the allotment was completed on 6/9/2010. The results of the assessment and inventory are summarized in the table below. Copies of the cultural resource assessments and inventories are in the WRFO archaeology files.

Table 9: Results of cultural assessment and inventory on the Cottonwood Draw Allotment

Allotment Number	Acres Inventoried at a Class III level	Acres NOT Inventoried at a Class III Level*	Percent -%- of Allotment Inventoried at a Class III level	Number of Cultural Resources known in allotment	High Potential of Historic Properties (yes/no)
06301	22	1202(122 BLM)	2%(18% BLM)	2(2 BLM)	Yes
Management Recommendations (Additional inventory required and historic properties to be visited)	A Class II inventory has already been conducted. Further reconnaissance of an 80-acre parcel in the west of the allotment and/or full inventory of the 40-acre parcel in the center of the allotment (already subject to reconnaissance) is recommended though not required. 5MF7071 must be monitored during the 10-year term of the permit.				

Only the recently completed Class II inventory has been conducted within the allotment, resulting in the complete coverage (Class III) inventory of 22 acres and the recording of two cultural resources. The types of cultural resources include 1 prehistoric rock art site and 1 historic livestock control fence. The sites represent an indeterminate time frame likely ranging from the middle Archaic Era (ca. 2500 BC) through the 1930's. The eligibility status of these cultural resources for listing in the National Register of Historic Places (NRHP) is: 1 Not Eligible and 1 Eligible.

Based on available data (cf. Haymes 2010), a moderate potential for historic properties occurs in the Cottonwood Draw Allotment. No livestock concentration areas have been identified on the BLM portions of the allotment, excepting one discovered during fieldwork. While further inventory is not required, previously unexplored or partially explored portions of the allotment under direct BLM management should be investigated for cultural resources.

If historic properties are located during any subsequent field inventory or reconnaissance and BLM determines that grazing activities will adversely impact the properties, mitigation will be identified and implemented in consultation with the Colorado State Historic Preservation Office (SHPO).

On January 27th, 2010, the WRFO requested consultation with the Ute Tribe of the Uinta and Ouray Reservation, the Ute Mountain Ute Tribe, the Southern Ute Tribe, the Eastern Shoshone Tribe, and the Shoshone Tribe of the Fort Hall Reservation, identifying all then-proposed FY 2010 Environmental Assessments and providing links to a continuously updated list of WRFO EAs. Tribal comments were requested by 30 days after receipt of the letters. A follow-up call was made to each tribe on 3/15/2010. No comments were received by WRFO.

Environmental Consequences of the Proposed Action (Alternative A): The direct impacts that occur where livestock concentrate include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gullying, and increased potential for unlawful collection and vandalism. Continued grazing may cause substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties.

One known historic property is located in an area where livestock congregate. The historic property is the newly-recorded rock art site 5MF7071, Eligible for NRHP listing. Recorded damage to the surface of the rock art panels may have resulted from livestock impacts, natural weathering, or natural spalling. Livestock impacts will be assessed within the ten-year period of the permit during monitoring of this site.

If historic properties are located during any subsequent field inventory, BLM will field visit these properties and assess the livestock grazing impacts. The livestock impacts will be assessed within the ten-year period of the permit.

Environmental Consequences of Continuation of Current Management (Alternative B): Alternatives A and B and are nearly identical in terms of their consequential effect on cultural resources. The short time frame of pasture use should have the effect of decreasing any potential damage to existing cultural resources by decreasing the time frame for impacts on any given site.

Environmental Consequences of the No Grazing Alternative (Alternative C): Impacts to cultural resources would cease under the No Grazing Alternative.

Mitigation: Site 5MF7071: The observed mineral feeder will be removed from the vicinity of this site. In addition, structures to divert livestock (such as fences or strategically placed and anchored logs) may be erected. Monitoring of the site within one year of the removal of the aforementioned mineral feeder will assess the need for livestock-diverting structures. If such structures are built, monitoring of the site over the ten-year period of the permit will determine their efficacy. In this situation, a determination will be made at that time to leave the structures in place or improve them.

PALEONTOLOGY

Affected Environment: The Cottonwood Draw Allotment is underlain by Weber Sandstone, and Morgan Formation, as mapped by Tweto (1979). The BLM, WRFO has classified these formations as PFYC3 (under the Potential Fossil Yield Classification system), which means they have a moderate potential of containing significant fossils. However, recent archaeological inventory and reconnaissance resulted in the recording of vertebrate ichnofossil localities 5MF6828 and 5MF6829, indicating the Weber Sandstone has a high local potential for significant fossils.

Environmental Consequences of the Proposed Action (Alternative A): In general, paleontological materials (fossils) are not considered to be endangered by normal grazing activities. Some damage to fossil materials may occur in areas of livestock concentration. However, livestock concentration areas do not typically coincide with fossil-bearing rock outcrops due to their lack of vegetation and water (as is the case with 5MF6829). Therefore the potential for damage to undisturbed fossil remains is low. Livestock movement and concentration is, however, threatening fossils in the newly recorded 5MF6828. Direct impacts that may occur where livestock concentrate include trampling, chiseling and churning of site soils. There may be impacts from standing, leaning and rubbing against above ground features.

Indirect impacts may include soil erosion, gullying and increased potential for unlawful collection and vandalism. The short time frame of pasture use should have the effect of decreasing any potential damage to existing fossil resources by decreasing the time frame for impacts on any given site.

Environmental Consequences of Continuation of Current Management (Alternative B): Alternatives A and B and are nearly identical in terms of their consequential effect on fossil resources. The short time frame of pasture use should have the effect of decreasing any potential damage to existing fossil resources by decreasing the time frame for impacts on any given site.

Environmental Consequences of the No Grazing Alternative (Alternative C): Direct and indirect impacts to paleontological resources from grazing activities would cease.

Mitigation: As the primary fossil occurrence of 5MF6828 coincides spatially with NRHP Eligible rock art site 5MF7071, and as mitigations have been developed to protect the archaeological values at this location, no further actions will be necessary to protect paleontological values.

The operator is responsible for informing all persons who are associated with the allotment activities that they will be subject to prosecution for knowingly disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood, or collecting fossils for commercial purposes on public lands. If fossils are discovered during allotment activities, the operator is to immediately stop activities that might further disturb such materials, contact the authorized officer, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage.

ELEMENTS NOT PRESENT OR NOT AFFECTED:

No flood plains, or prime and unique farmlands exist within the area affected by the Proposed Action. There are also no known Native American religious or environmental justice concerns associated with the Proposed Action.

OTHER ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Other Element	NA or Not Present	Applicable or Present, Not Brought Forward for Analysis	Applicable & Present and Brought Forward for Analysis
Visual Resources	X		
Fire Management	X		
Forest Management	X		
Hydrology/Water Rights	X		
Rangeland Management			X

Other Element	NA or Not Present	Applicable or Present, Not Brought Forward for Analysis	Applicable & Present and Brought Forward for Analysis
Wild Horse Management	X		
Realty Authorizations	X		
Recreation	X		
Access and Transportation	X		
Geology and Minerals	X		
Areas of Critical Environmental Concern	X		
Wilderness	X		
Wild and Scenic Rivers	X		
Cadastral	X		
Socio-Economics		X	
Law Enforcement		X	

RANGELAND MANAGEMENT

Affected Environment: Marynell Snow (0501442) is the BLM authorized grazing permit holder on the Cottonwood Draw (06301) Allotment. The snow's generally summer their livestock on the Stuntz Valley Allotment administered out of the Vernal Field Office in Utah before gathering their livestock in the fall. In years past, the Cottonwood Draw Allotment has been used summer-long for 56 cows from June 1st until September 30th. The Snows are now proposing to use the Cottonwood Draw Allotment as a gathering pasture in the fall after they are finished using the Stuntz Valley Allotment. They also proposed having the ability to bring 20 yearlings onto the allotment from June 1st to June 30th on some years as needed.

The following tables (Acres & AUM Breakdown) are a summarization of the individual Livestock Grazing Capacity tables, which are broken down by surface ownership (BLM, private), soil units and acres/AUM for the allotment. As stated earlier, an AUM is the amount of forage necessary for the sustenance of 1 cow-calf pair for a period of 1 month. The acres & AUM table shows an estimated carrying capacity of livestock for land ownership of the Cottonwood Draw Allotment. The %PL, which is the percentage of BLM AUMs in relation to total AUMs, was determined for the entire allotment. Marynell and Jon Snow submitted *Grazing Application for Permit Renewal* that was developed with the BLM, and the Livestock Grazing Capacity (see tables below) analysis of forage production, were used to determine the rangeland's available forage contribution, even though in certain instances the estimated grazing capacity exceeds that within the *Grazing Application for Permit Renewal* and Proposed Action. Reasons for the higher livestock carrying capacity AUMs are that the application and Proposed Action take into consideration such factors as available water, distance from water to foraging areas, cattle distribution, and herding practices.

Also, these tables below are based upon a moderate stocking level that is generally less than the stocking rates recommended by the Natural Resources Conservation Service (NRCS) for the specific ecological sites. The reason for this is in consideration of a moderate stocking level that

meets Public Land Health Standards in relation to the rangeland's carrying capacity and current rangeland conditions.

Table 10: AUM breakdown on BLM lands within the Cottonwood Draw Allotment

Cottonwood Draw Allotment-BLM				
Soil Unit	**Ecological Site**	**BLM Acres**	**Acres/ AUM**	**BLM AUMs**
Ustorthents, frigid-Borolls complex, 25-75%slope	---	2	0	0
Emlin loam, 1-12%slope	Deep Loam	66	4	17
Layoint-Moosed-Berlake complex, 1-20%slope	Sandy Foothill	75	6	13
	Total	**143**		**30**

Table 11: AUM breakdown on private lands within the Cottonwood Draw Allotment

Cottonwood Draw Allotment-Private Lands				
Soil Unit	**Ecological Site**	**Private Acres**	**Acres/ AUM**	**Private AUMs**
Ustorthents, frigid-Borolls complex, 25-75%slope	---	42	0	0
Emlin loam, 1-12%slope	Deep Loam	395	4	99
Ninot-Crago-Garlips complex, 15-45%slope	Dry Mountain Loam	15	6	3
Cortyzach-Duffymont complex, 3-25%slope	Mountain Loam	136	4	34
Layoint-Moosed-Berlake complex, 1-20%slope	Sandy Foothill	474	6	79
	Total	**1062**		**215**

Environmental Consequences of the Proposed Action (Alternative A): Proposed livestock use under the Proposed Action is within acceptable limits for moderate use on the allotment. The total number of AUM's approved under this action would be 219 AUM's with 26 AUM's on BLM at 12% public land. Livestock use in the early part of the growing season would also be reduced under this proposal. The 1997 RMP/ROD has a minimum rest requirement for this allotment from 4/10-6/20 one in three years. This proposal does not fully meet this requirement, but does make progress towards meeting this standard and use would be light (2 BLM AUM's), and have will have little effect on vegetative production during the critical growing season. The remaining use for this allotment will occur in the fall after peak production for rangeland plants.

Throughout the permit renewal process, the BLM and grazing permittees worked together to develop a grazing schedule that would minimize hardships on the permittee while making progress towards meeting Public Land Health Standards and the 1997 ROD/RMP. Monitoring will continue on the grazing allotment through utilization measurements and reading of the long-term trend plots to ensure that the proposed management would meet BLM management objectives. If it appears this management strategy is not working, further adjustments will be made and analyzed in a separate NEPA document.

It is anticipated that the management of the rangelands by the permittee will not be significantly impaired by implementation of the Proposed Action, as the ranch was instrumental in the development of this action. Also, implementation of the Proposed Action will further enhance the ability of the rangelands to meet the various Public Land Health Standards.

Environmental Consequences of Continuation of Current Management (Alternative B): The no action alternative is a continuation of current management. This alternative does have an increase in use during the minimum rest requirement outlined in the 1997 ROD/RMP, however total AUM's approved is still within the moderate use levels for the allotment. This alternative permits 225 total AUM's with 27 AUM's on BLM at 12% public land.

This alternative also does not fit in with the ranches long-term operation plan. The ranch does most of their summer use on a large allotment administered out of the Vernal Field Office, and this allotment would generally be a fall gathering pasture. As mentioned above, the BLM and grazing permittees worked together to develop a grazing schedule that would minimize hardships on the permittee while making progress towards meeting public land health standards and the 1997 ROD/RMP. Implementation of this alternative would require a change in the long-term operational plans of the permittee.

Environmental Consequences of the No Grazing Alternative (Alternative C): Under this alternative, grazing permittees would not have the ability to authorize their existing grazing permit (0501442). Privately controlled forage accounts for 88% of the total forage on the Cottonwood Draw Allotment, therefore the grazing permittee would have to fence all private lands to utilize this forage potentially creating an economic hardship on the permittee. This alternative would also not be in compliance with the 1997 WRFO RMP/ROD decision to provide for livestock grazing as one of the acceptable multiple uses.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts from the Proposed Action and other land uses would not exceed those discussed in the White River ROD/RMP and/or White River Resource Area Grazing Management Environmental Impact Statement (EIS).

REFERENCES CITED:

Colorado Greater-Sage Grouse Conservation Plan; Steering Committee. 2008. The Colorado Greater Sage-Grouse Conservation Plan (CCP). Colorado Division of Wildlife. Denver, CO. Unpublished report.

Connelly, J.W., Schroeder, M.A., Sands, A.R., and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. *Wildlife Society Bulletin* 28:967-985.

Haymes, Geoffrey
2010 Class II Inventory and Reconnaissance for the Cottonwood Draw Allotment (#06301) in Moffat County, Colorado. Bureau of Land Management, White River Field Office, Meeker, Colorado. WRFO CRIR# 10-10-10.

Tweto, Ogden
1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: A Public Notice of the NEPA action is posted on the White River Field Office Internet website at the Colorado BLM Home Page asking for public input on Grazing Permit renewals and the assessment of Public Land Health Standards within the White River Field Office area. The Grazing Advisory Board was notified of impending Grazing Permit renewals. Also, individual letters are sent to the lessees/permittees informing them that their permit is up for renewal and request any information they want included in or taken into consideration during the grazing permit renewal process. Meetings were held with the permittee to discuss and develop the Proposed Action.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality, Wastes (Hazardous or Solids), Water Quality (Surface and Ground), Hydrology and Water Rights,	5/24/2010
Maggie Marston	Botanist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species	1/23/2010
Geoffrey Haymes	Archaeologist	Cultural Resources, Paleontological Resources	6/9/2010
Matthew Dupire	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management, Wetlands and Riparian Zones, and Soils	9/27/2010
Lisa Belmonte	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife	07/21/2010
Christina Barlow	Natural Resource Specialist/HazMat Coordinator	Wastes, Hazardous or Solid	9/27/2010
Jim Michels	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation, Visual Resources	06/07/2010
Jim Michels	Forester /Fire / Fuels Technician	Fire Management, Forest Management	06/07/2010
Paul Daggett	Mining Engineer	Geology and Minerals	05/12/2010
Stacey Burke	Realty Specialist	Realty Authorizations	9/27/2010
Melissa J. Kindall	Range Technician	Wild Horse Management	03/24/2010

Finding of No Significant Impact/Decision Record (FONSI/DR)

DOI-BLM-CO-110-2010-0050-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the Proposed Action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the Proposed Action.

DECISION/RATIONALE: It is my decision to offer a proposed decision to implement the grazing schedule outlined in the Proposed Action with the addition of the mitigation listed below.

MITIGATION MEASURES:

1. Contact the BLM WRFO Hazardous Materials Coordinator at (970) 878-3800 and/or the Colorado Department of Public Health and Environment (CDPHE) through the 24-hour spill reporting line at 1(877)518-5608, if the permittee suspects the release of any chemical, oil, solid waste, petroleum product, or sewage within the allotment.

2. Cultural site 5MF7071: The observed mineral feeder will be removed from the vicinity of this site. In addition, structures to divert livestock (such as fences or strategically placed and anchored logs) may be erected. Monitoring of the site within one year of the removal of the aforementioned mineral feeder will assess the need for livestock-diverting structures. If such structures are built, monitoring of the site over the ten-year period of the permit will determine their efficacy. In this situation, a determination will be made at that time to leave the structures in place or improve them.

3. The operator is responsible for informing all persons who are associated with the allotment activities that they will be subject to prosecution for knowingly disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood, or collecting fossils for commercial purposes on public lands. If fossils are discovered during allotment activities, the operator is to immediately stop activities that might further disturb such materials, contact the authorized officer, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage.

COMPLIANCE/MONITORING: See monitoring and evaluation section.

NAME OF PREPARER: Matthew L Dupire

NAME OF ENVIRONMENTAL COORDINATOR: Kristin Bowen

SIGNATURE OF AUTHORIZED OFFICIAL: James R Roberts
for Field Manager

DATE SIGNED: 11/9/2010

ATTACHMENTS: Map 1

Map 1: Cottonwood Draw (06301) Allotment boundary